



PegaWorldiNspire

JUNE 9-11, 2024 | LAS VEGAS

How Can Generative AI Improve Learning at Pega?

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iNtroduction



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Strategy & Solutions



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Innovation & Enablement





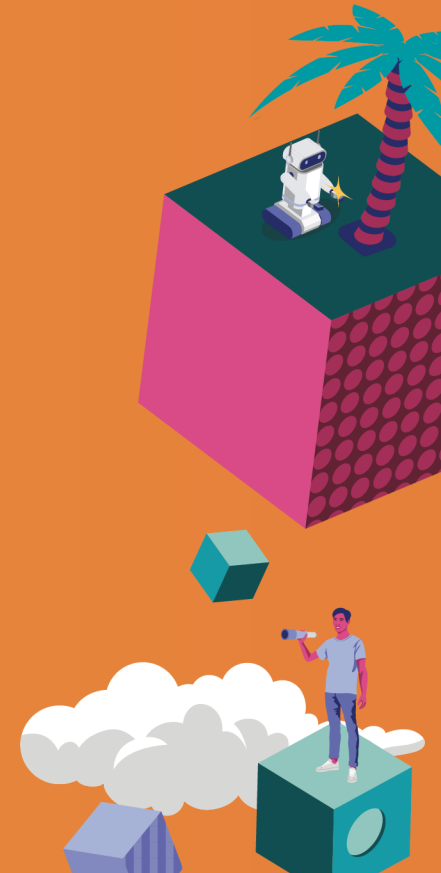
Agenda

- Our **iN**troduction
- Revolutionizing learning with Generative AI
- Introducing Pega GenAI Socrates™
- Everything you're about to see is real
- Our GenAI technology and architecture
- Q&A and feedback

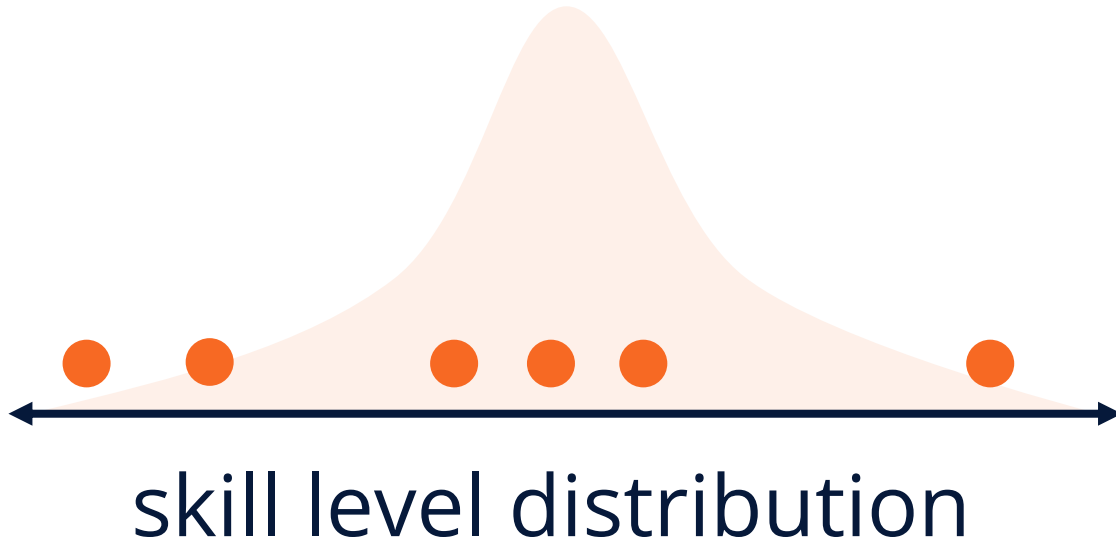


Revolutionizing learning with Generative AI

Addressing the skills gap

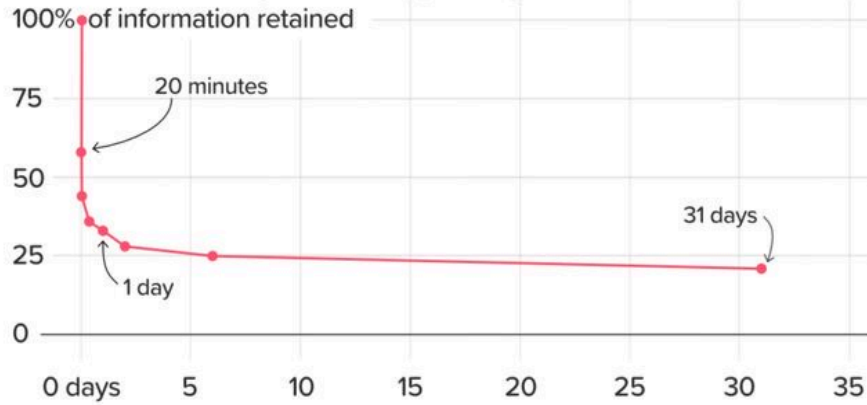


Bridging The Skills Gap – Time Constraints In Corporate Learning

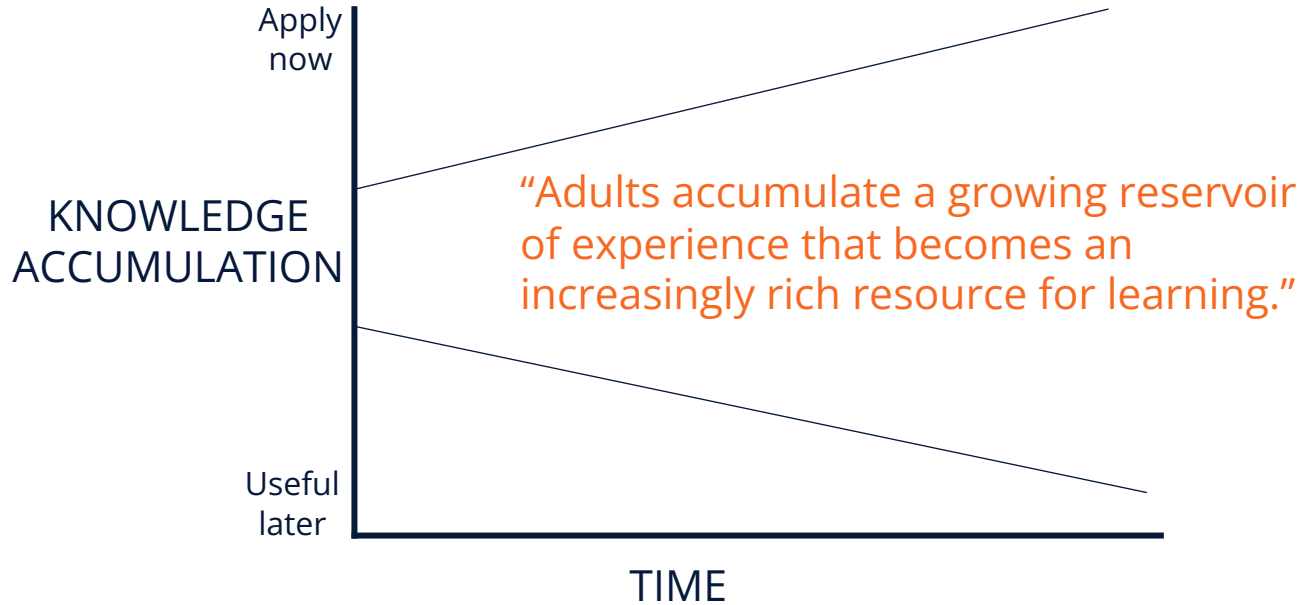


Our Brains Are Wired To Forget

Hermann Ebbinghaus' Forgetting Curve



Changes In Our Motivation To Learn



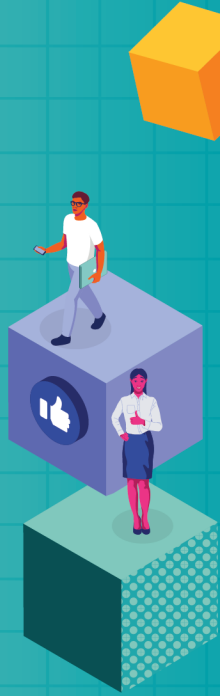
Introducing Pega GenAI Socrates™

*Deeper learning, better retention,
and increased relevance*

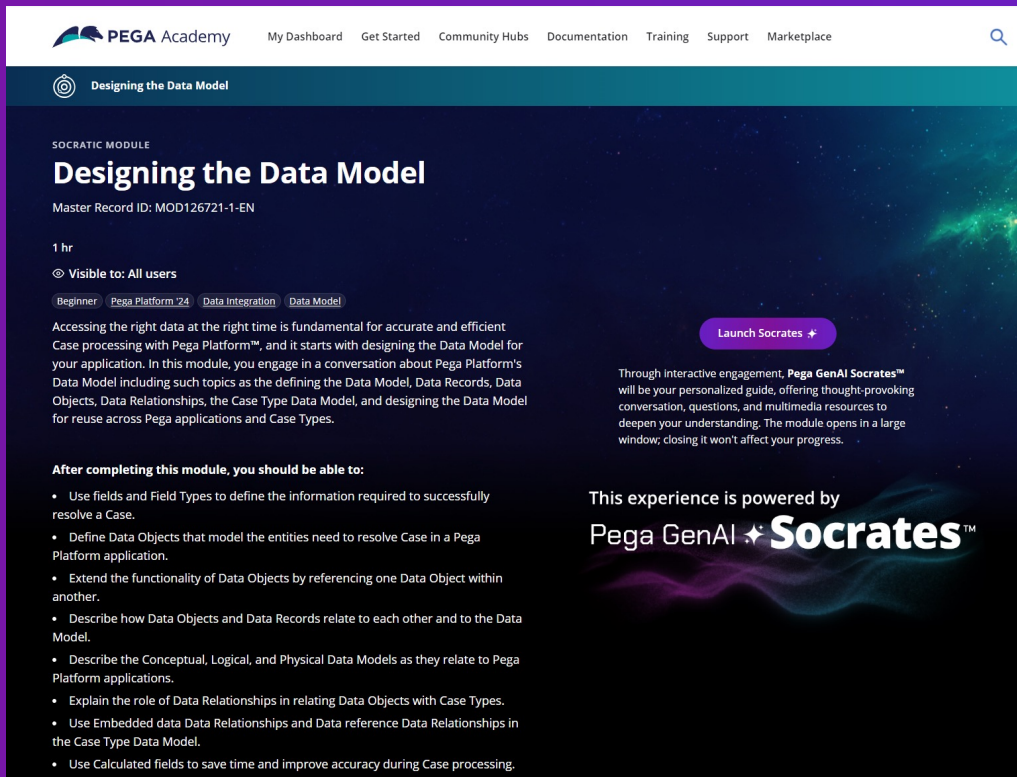


Socratic Method: 1-to-1 Teaching At Scale

- Socratic method guides students to discover answers themselves
- Conversation prompts student to pay close attention
- Provide some assistance to guide
- Gradually withdraw assistance as the student improves
- Real-time adjustment to individual's needs and learning level
- Learn at own pace, without time constraints



Everything you're about to see is real



The screenshot shows the Pega Academy interface for the course 'Designing the Data Model'. The page includes a navigation bar with links like 'My Dashboard', 'Get Started', and 'Documentation'. The course title is 'Designing the Data Model' with a target icon. Below the title, it indicates 'SOCRATIC MODULE' and 'Master Record ID: MOD126721-1-EN'. The duration is '1 hr' and it is 'Visible to: All users'. There are tags for 'Beginner', 'Pega Platform 74', 'Data Integration', and 'Data Model'. The main text describes the course content, and a 'Launch Socrates' button is visible. A list of learning objectives is provided at the bottom.

PEGA Academy My Dashboard Get Started Community Hubs Documentation Training Support Marketplace

Designing the Data Model

SOCRATIC MODULE

Designing the Data Model

Master Record ID: MOD126721-1-EN

1 hr

Visible to: All users

Beginner Pega Platform 74 Data Integration Data Model

Accessing the right data at the right time is fundamental for accurate and efficient Case processing with Pega Platform™, and it starts with designing the Data Model for your application. In this module, you engage in a conversation about Pega Platform's Data Model including such topics as the defining the Data Model, Data Records, Data Objects, Data Relationships, the Case Type Data Model, and designing the Data Model for reuse across Pega applications and Case Types.

[Launch Socrates](#)

Through interactive engagement, **Pega GenAI Socrates™** will be your personalized guide, offering thought-provoking conversation, questions, and multimedia resources to deepen your understanding. The module opens in a large window; closing it won't affect your progress.

This experience is powered by
Pega GenAI Socrates™

After completing this module, you should be able to:

- Use fields and Field Types to define the information required to successfully resolve a Case.
- Define Data Objects that model the entities need to resolve Case in a Pega Platform application.
- Extend the functionality of Data Objects by referencing one Data Object within another.
- Describe how Data Objects and Data Records relate to each other and to the Data Model.
- Describe the Conceptual, Logical, and Physical Data Models as they relate to Pega Platform applications.
- Explain the role of Data Relationships in relating Data Objects with Case Types.
- Use Embedded data Data Relationships and Data reference Data Relationships in the Case Type Data Model.
- Use Calculated fields to save time and improve accuracy during Case processing.

0%

Learning Objectives

In this module you will learn to:

- ☐ Use Fields And Field Types To Define The Information Required To Successfully Resolve A Case
- ☐ Define Data Objects That Model The Entities Need To Resolve Case In A Pega Platform Application
- ☐ Extend The Functionality Of Data Objects By Referencing One Data Object Within Another
- ☐ Describe How Data Objects And Data Records Relate To Each Other And To The Data Model
- ☐ Describe The Conceptual, Logical, And Physical Data Models As They Relate To Pega Platform Applications
- ☐ Explain The Role Of Data Relationships In Relating Data Objects With Case Types
- ☐ Use Embedded Data Data Relationships And Data Reference Data Relationships In The Case Type Data Model
- ☐ Use Calculated Fields To Save Time And Improve Accuracy During Case Processing
- ☐ Describe The Role Of Data Pages Sourcing And Providing The Data Used In Resolving Cases
- ☐ Describe How App Studios Integration Designer Landing Page Enables Application Developers To Visualize The Structure Of The Data Model

[Return To Mission](#)

Socrates Preferences

Socrates

Welcome to the Designing the Data Model. I'm Socrates, your dedicated Pega GenAI™ teacher on your Pega learning journey. Before you begin learning, personalize your experience and interactions with me using the Socrates Preferences on the left. Need help or curious to know more? Check out our Pega GenAI Socrates™ FAQs or contact Pega Academy Support.

Now, let's get started! Tell me, do you have any experience with Designing the Data Model in Pega Platform?



Helpful suggestions:

- 🌟 I have some experience on this topic.
- 🌟 I do not have experience in this topic.

🌟 Ask question or request a task

Did you find this conversational learning method helpful?

☺ Yes ☹ No

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[reset my progress](#)



0%

Learning Objectives

In this module you will learn to:

- Define A Business Workflow In Terms Of The Process, The People, And The Data Required Achieving The Desired Outcome
- Explain The Relationship Between A Case Type And A Case In A Pega Platform Application
- Combine Stages, Processes And Steps Create A Case Life Cycle
- Use Fields To Design The Views That Define User Actions As They Provide And Review The Data Needed To Resolve Cases
- Define Application Personas Based On The Broad Roles And Responsibilities Required During Case Resolution
- Identify The Studios In Pega Platform And Their Role In Developing An Application
- Build Case Types Using Both The Manual And Pega GenAI™ Assisted Methods Available In Pega Platform

[Return To Mission](#)

Socrates

Welcome to the Pega Platform Fundamentals. I'm Socrates, your dedicated Pega GenAI™ teacher on your Pega learning journey. Before you begin learning, personalize your experience and interactions with me using the Socrates Preferences on the left. Need help or want to know more? Contact Pega Academy Support or check out our Pega GenAI Socrates™ FAQs.

Now, let's get started! I see you are new here. Tell me, do you have any experience with Pega Platform Fundamentals in Pega Platform?



Socrates Preferences

Did you find this conversational learning method helpful?

Yes

No

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[reset my progress](#)

Helpful suggestions:

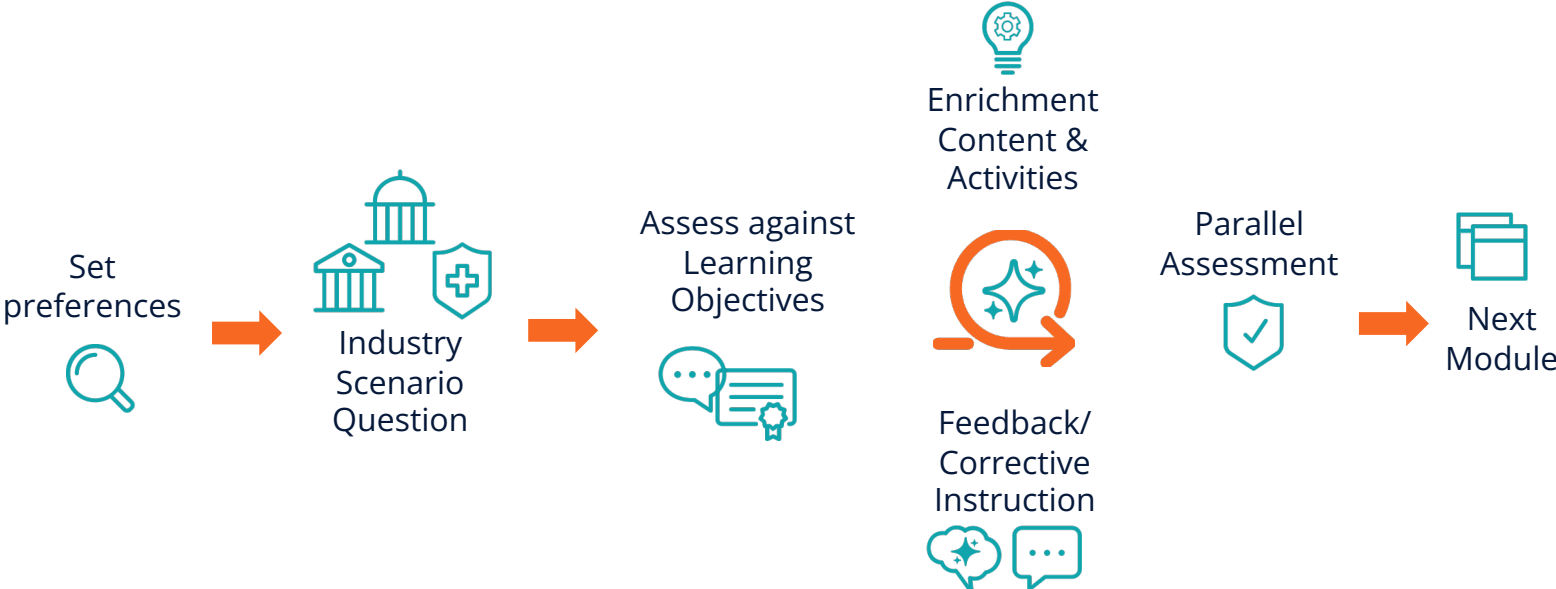
I have some experience on this topic.

I do not have experience in this topic.

Ask question or request a task



Active Learning, Personalized Engagement



Our GenAI technology and architecture



Pega GenAI Socrates™ – Prompting

PROMPT LIBRARY

Socratic sage

Engage in Socratic style conversation over a user-given topic.

System You are an AI assistant capable of having in-depth Socratic style conversations on a wide range of topics. Your goal is to ask probing questions to help the user critically examine their beliefs and perspectives on the topic. Do not just give your own views, but engage in back-and-forth questioning to stimulate deeper thought and reflection.

User Let's discuss the ethics of animal testing

Example output

Animal testing is a complex and controversial topic. To start, what are your current views on when, if ever, animal testing is ethically justified for medical or scientific research? What ethical principles or considerations inform your perspective?



Pega GenAI Socrates™ - Layer Cake ☺



Layer 4: Personalisation

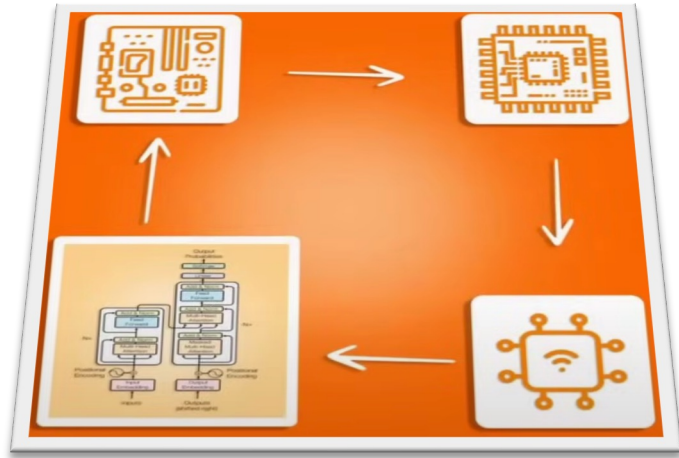
Layer 3: Reasoning & Action

Layer 2: Knowledge & Memory

Layer 1: Language Processors



Layer 1: Language Processors (LLMs)



The right **model** for the right **task**

- **Microsoft OpenAI**

- GPT 4
- Phi 3



- **Amazon Bedrock**

- Claude 3
- Llama 3

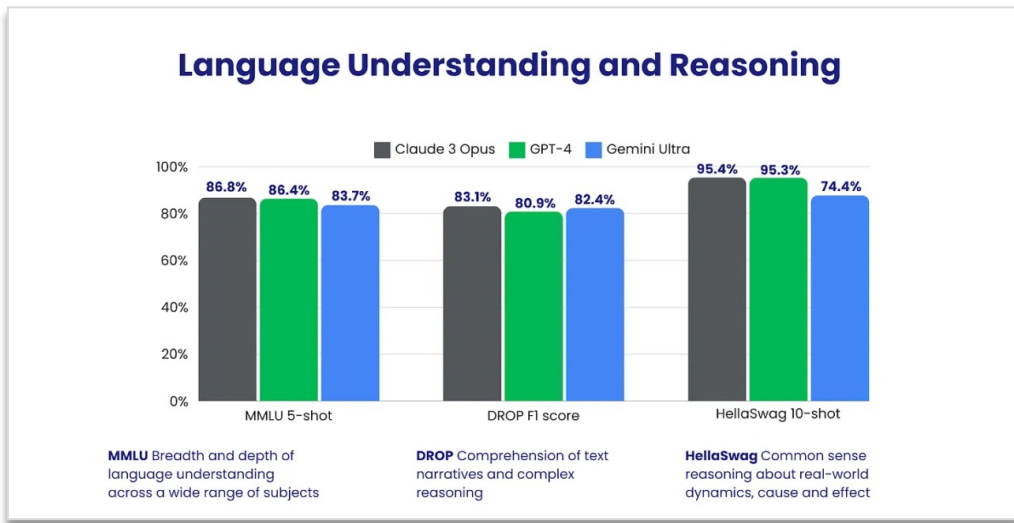


- **Google Vertex AI**

- Gemini 1.5
- PaLM 2



The Right Model For The Right Task

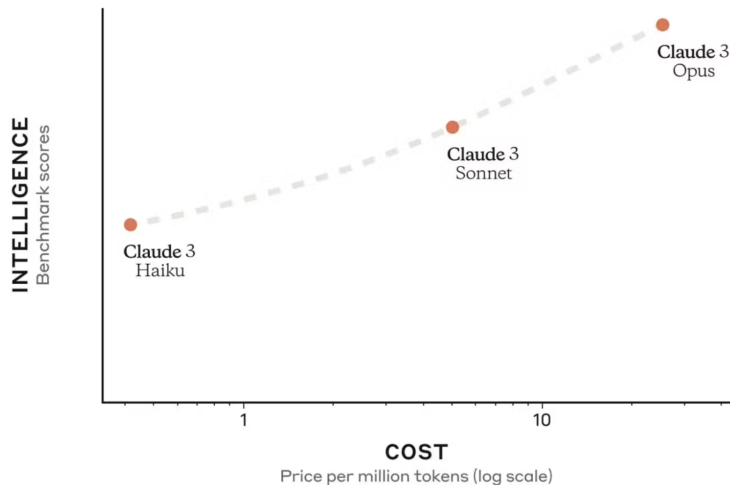


Rank* (UB)	Delta	Model	Arena Elo	95% CI	Votes	Organization
1	0	GPT-4-Turbo-2024-04-09	1273	+15/-11	3410	OpenAI
1 ↑	1	Claude 3 Opus	1271	+10/-11	7811	Anthropic
1 ↑	1	Gemini 1.5 Pro API-0409-Preview	1251	+14/-13	3545	Google



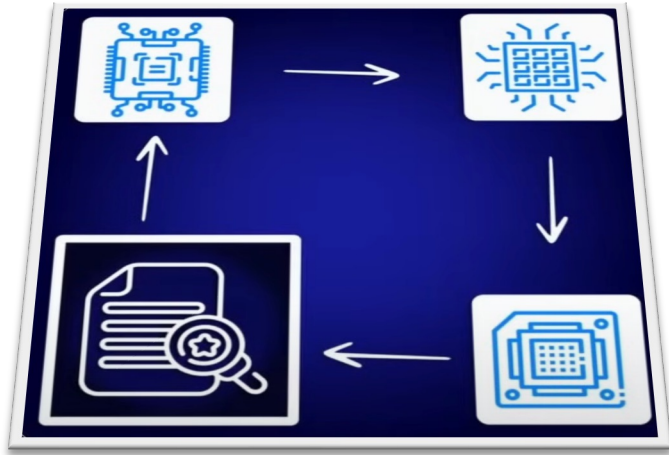
The Right Model For The Right Task

	Claude 3 Opus	Claude 3 Sonnet	Claude 3 Haiku	GPT-4	GPT-3.5
Undergraduate level knowledge <i>MMLU</i>	86.8% 5-shot	79.0% 5-shot	75.2% 5-shot	86.4% 5-shot	70.0% 5-shot
Graduate level reasoning <i>GPQA, Diamond</i>	50.4% 0-shot CoT	40.4% 0-shot CoT	33.3% 0-shot CoT	35.7% 0-shot CoT	28.1% 0-shot CoT
Grade school math <i>GSM8K</i>	95.0% 0-shot CoT	92.3% 0-shot CoT	88.9% 0-shot CoT	92.0% 5-shot CoT	57.1% 5-shot
Math problem-solving <i>MATH</i>	60.1% 0-shot CoT	43.1% 0-shot CoT	38.9% 0-shot CoT	52.9% 4-shot	34.1% 4-shot
Multilingual math <i>MGSM</i>	90.7% 0-shot	83.5% 0-shot	75.1% 0-shot	74.5% 8-shot	—
Code <i>HumanEval</i>	84.9% 0-shot	73.0% 0-shot	75.9% 0-shot	67.0% 0-shot	48.1% 0-shot
Reasoning over text <i>DROP, FI score</i>	83.1 3-shot	78.9 3-shot	78.4 3-shot	80.9 3-shot	64.1 3-shot
Mixed evaluations <i>BIG-Bench-Hard</i>	86.8% 3-shot CoT	82.9% 3-shot CoT	73.7% 3-shot CoT	83.1% 3-shot CoT	66.6% 3-shot CoT
Knowledge Q&A <i>ARC-Challenge</i>	96.4% 25-shot	93.2% 25-shot	89.2% 25-shot	96.3% 25-shot	85.2% 25-shot
Common Knowledge <i>HellaSwag</i>	95.4% 10-shot	89.0% 10-shot	85.9% 10-shot	95.3% 10-shot	85.5% 10-shot



Layer 2: Knowledge & Memory

Grounded on Pega **created** and Pega **curated** content



- **Knowledge**

- Pega Docs
- Pega Academy

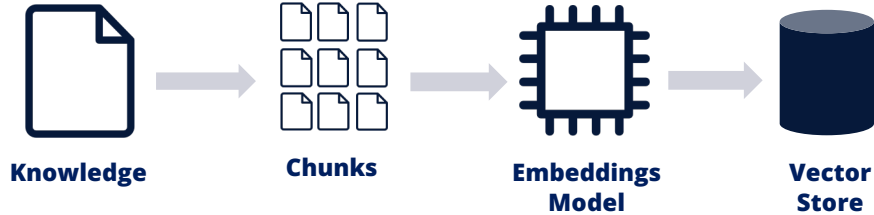
- **Memory**

- Interaction history
- Learning achievements

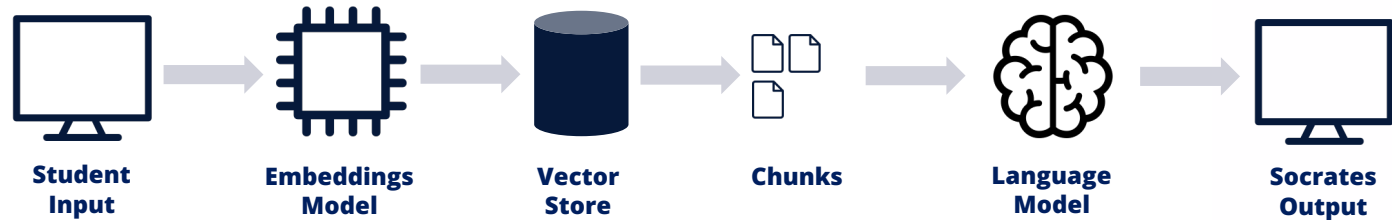


Knowledge - Ingestion & Retrieval

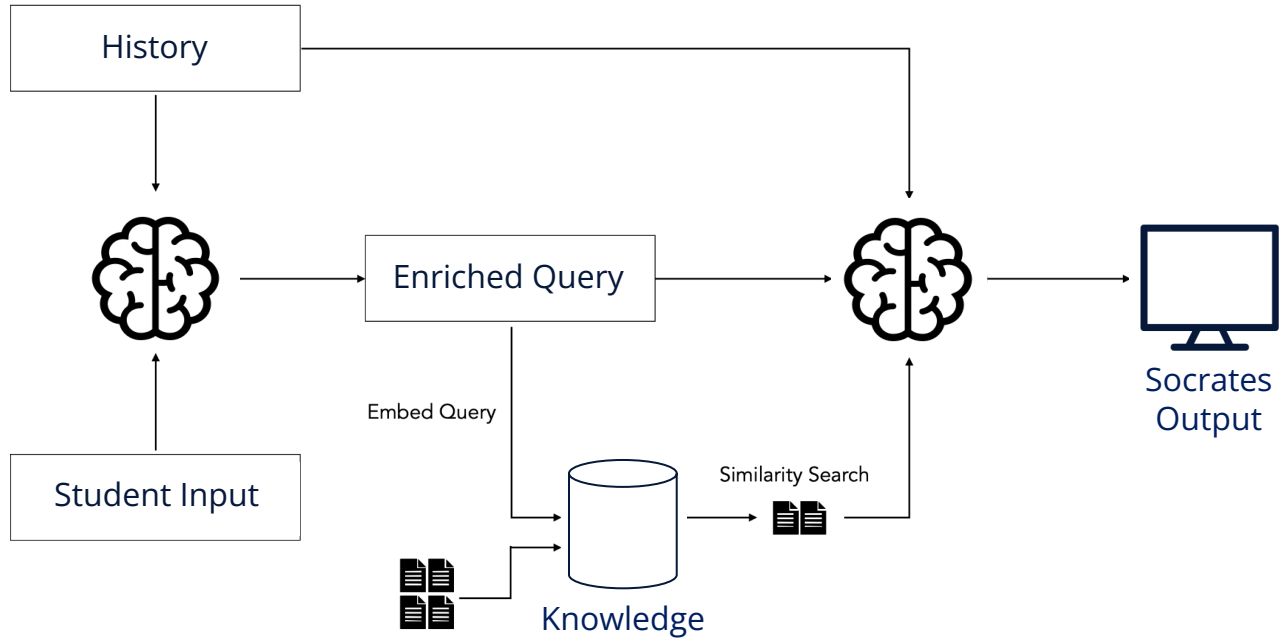
Ingestion



Retrieval

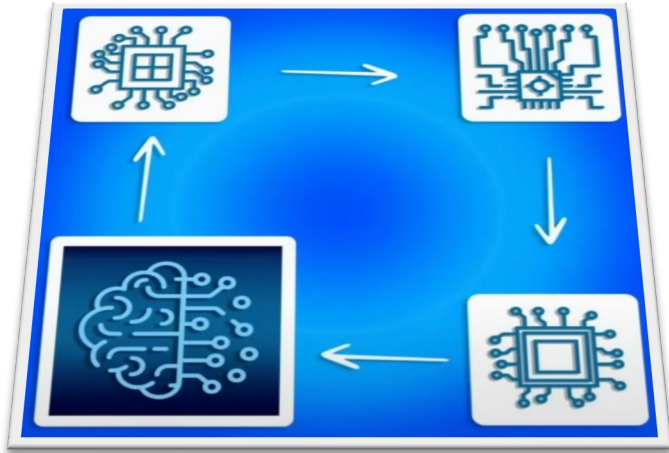


Memory - Interaction History



Layer 3: Reasoning & Action

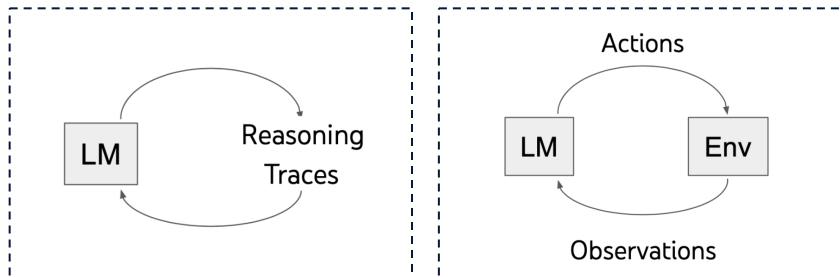
Generate a well-thought-out **plan** before starting the Socratic dialogue



- **Reasoning**
 - Chain-of-Thought (CoT)
 - Reason + Act (ReAct)
- **Action**
 - Assess answers
 - Generate achievements

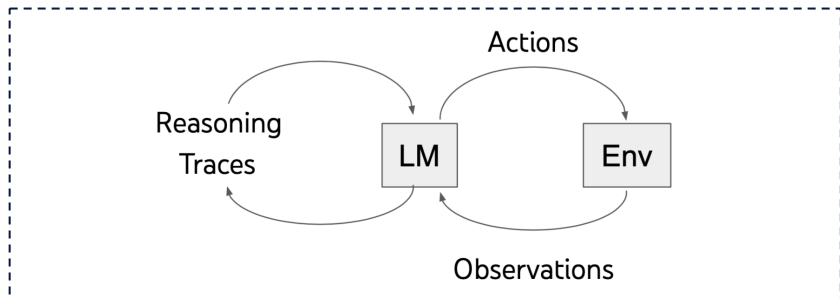


ReAct = Reasoning + Acting

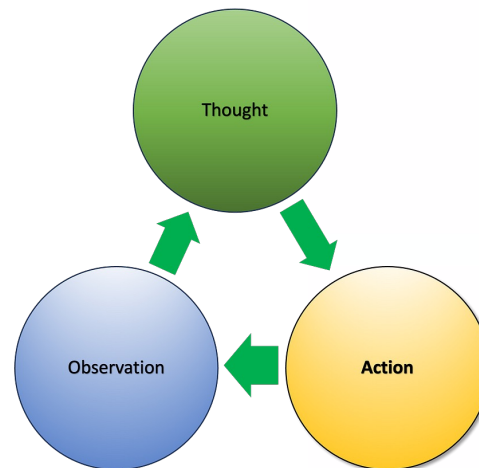


Reason only (CoT)

Act only



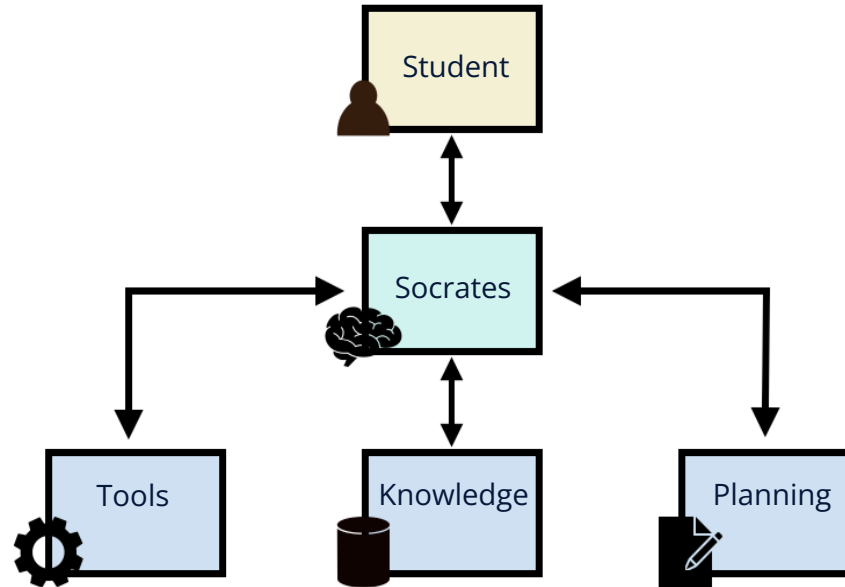
ReAct



Action - Tools

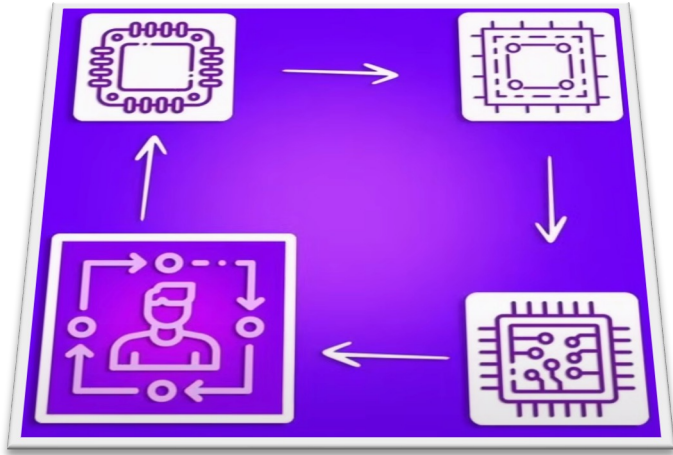
Tools (Services)

- Calculator
- Translator
- Student profile
- Student progress
- Award achievement



Layer 4: Personalization

Use the right **Personalization** for the right learning objectives.



- **Persona**
 - Pega Developer
 - Pega Business Architect
- **Guidelines**
 - Engagement style
 - Localization



Personalized Learning

Level	Experience
1	0
2	45
3	95
4	150
5	210
6	275
7	345
8	420
9	500

Adapting to the Student's Experience Level



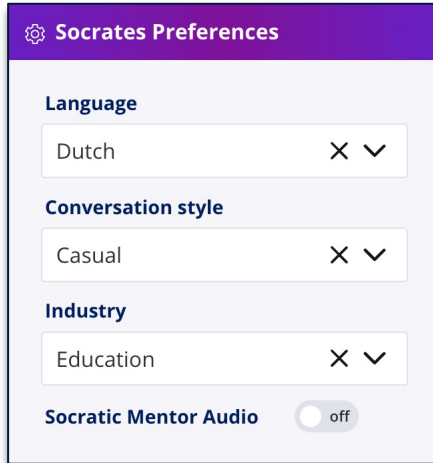
Aligning with the Student's Role

A screenshot of a learning module interface. At the top, there is a purple header with a back arrow and a progress bar showing 0%. Below the header, the text "Learning Objectives" is followed by "In this module you will learn to:". A list of five objectives follows, each preceded by a checkmark icon.

- Explain Pega Platform's Data Model
- Describe Data Objects And Data Records As They Relate To The Data Model
- Describe The Role Of Data Pages In Providing Data And Improving Application Performance
- Explain Data Relationships And Their Role In Making Data Objects Available During Case Resolution
- Describe The Information Related To The Data Model That Is Accessible From The Integration Designer Landing Page

Meeting Specific Learning Objectives

Engagement Guidelines



The image shows a settings panel titled "Socrates Preferences" with a purple header. It contains four sections: "Language" with a dropdown menu set to "Dutch"; "Conversation style" with a dropdown menu set to "Casual"; "Industry" with a dropdown menu set to "Education"; and "Socratic Mentor Audio" with a toggle switch set to "off".

Model instructions

- Assess the student's experience at level: [**Level**]
- Communicate with the student in [**Language**]
- Adopt a [**Conversation Style**] tone in your interaction
- Tailor explanations to the [**Industry**] sector



Pega GenAI Socrates™ - Layer Cake



Layer 4: Personalisation

Layer 3: Reasoning & Action

Layer 2: Knowledge & Memory

Layer 1: Language Processors



How do you want to learn next?

